

WHAT IS CLAIMED IS:

1. An accumulation type fuel injection system having a high-pressure supply pump, which is driven by an internal combustion engine to rotate so that the high-pressure supply pump pressurizes and discharges drawn fuel, and an accumulation device for accumulating the high-pressure fuel discharged from the high-pressure supply pump, the accumulation type fuel injection system supplying the accumulated high-pressure fuel to cylinders of the internal combustion engine through injectors mounted to the cylinders, wherein;

the accumulation device has a common rail main body providing an accumulation chamber for accumulating the high-pressure fuel, distributing portions capable of being connected with pressure introduction pipes for introducing the high-pressure fuel accumulated in the common rail main body to the injectors respectively and accessory portions, which are disposed on fuel outlet sides of the distributing portions and are connected with the distributing portions and the pressure introduction pipes respectively in thread connection, and

the accessory portion has a sealing member between the accessory portion and a connection object on the distributing portion side, to which the accessory portion is connected in thread connection, the sealing member having a sealing surface substantially in the shape of a spherical surface on the connection object side.

2. The accumulation type fuel injection system as in claim 1, wherein the distributing portions and the common rail main body are formed as separate parts and are integrated through a joining process.

3. The accumulation type fuel injection system as in claim 2, wherein the distributing portions and the common rail main body are integrated through a welding process or a brazing process.

4. The accumulation type fuel injection system as in claim 2, wherein;

the common rail main body is formed of an injection steel pipe made through a drawing process or a flatting process, and

the distributing portion is formed of a forged product or a cut product substantially in the shape of a cylinder, wherein the distributing portion has a threaded portion on an inner peripheral surface thereof near an end thereof.

5. The accumulation type fuel injection system as in claim 1, wherein the accessory portion is a safety device for stopping the fuel supply from the accumulation device to the injector in the case where the injector injects the high-pressure fuel excessively.

6. The accumulation type fuel injection system as in claim

5, wherein;

the accessory portion has a body, which is formed with a screw threaded to the distributing portion, a valve member, which is capable of moving in an axial direction inside the body, and a biasing spring for biasing the valve member toward the distributing portion, and

the valve member contacts a surface of the sealing member substantially opposite from the sealing surface on the connecting object side so that an initial position of a travel distance of axial movement of the valve member is defined.

7. The accumulation type fuel injection system as in claim 1, wherein the connection object is formed substantially in the shape of a conical surface.